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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/781,620

02/20/2004

Satoshi Nishida

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22852

7590

08/23/2005

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EXAMINER

WALSH, RYAN D

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,620

Applicant(s)

NISHIDA ET AL.

Examiner

Ryan D. Walsh

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. Please submit an IDS, and also include English translations with each foreign reference.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Page 23, Ln. 6 states a "support rail **82R**," but is not shown in the drawings. Page 22, Ln. 3, states an "intermediate roller **22D**," but is not shown in the drawings. In Figure 1, reference number **22** is included. Reference number **22** in the figure should either be changed to **22D**, or reference number **22D** on Page 22, Ln. 3 should be changed to **22**. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If

the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to because Fig. 3, reference number 9 should point at the "tension adjuster," and not point at the entire figure. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 22-28 and 29-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 22, the terminology "an output value" has no correlation to the previous part of the claim. Also, the underlined subject matter, "in order that an output

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value for transferring a toner image of the first color in the second mode is larger than that for transferring a toner image of the first color in the first mode when toner images are transferred onto the intermediate transfer body or the transfer material by the transfer section” is also unclear on how it relates to the rest of the claimed subject matter. Appropriate correction is required.

Regarding claim 29-36, the underlined subject matter, “wherein the control section controls the transfer unit in order that an output value of a transfer section provided correspondingly to an image bearing body other than a part of the image bearing bodies is smaller than that of a transfer section provided correspondingly to the part of the image bearing bodies when the toner image is formed on the part of the plurality of image bearing bodies to transfer the toner image on the intermediate transfer body or the transfer material” is unclear and indefinite. There is no distinction between an image bearing body other than part of the image bearing bodies is smaller than that of a transfer section. Also, as recited above, “an output value” has no correlation to the previous part of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1-3, 5-10, 12-17, and 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakagawa et al. (US Pub. 2003/0095815).

Regarding claim 1, Nakagawa et al. teach, "An image forming apparatus comprising: a transfer section (222 a, b, c, d) which transfers a toner image onto an intermediate transfer body or a transfer material (213) to form an image on the intermediate transfer body or the transfer material; a selection section [0102] for selecting one mode among a plurality of modes including a first mode for forming the image by using a plurality of colors including a first color and a second mode for forming the image by using less number of colors including the first color than that of the colors in the first mode [0104]; and a control section [0108] for controlling the transfer section in order that a transfer rate of a toner image of the first color in the second mode is larger than that of a toner image of the first color in the first mode when toner images are transferred onto the intermediate transfer body or the transfer material by the transfer section (Fig. 8b & 9b)."

Regarding claim 2, Nakagawa et al. teach, "wherein, the image is formed by using only one color in the second mode ([0105], Ln. 1-3)."

Regarding claim 3, Nakagawa et al. teach, "further comprising a plurality of image bearing bodies, on which the toner images having different colors from one another are formed (222 a, b, c, d), wherein an image bearing body on which a toner image is not formed among the plurality of image bearing bodies is separated from the intermediate transfer body or the transfer material in the second mode [0105]."

Regarding claim 5, Nakagawa et al. teach, "wherein the image forming apparatus comprises the intermediate transfer body having an endless belt-like shape (Fig.1, ref. # 216)."

Regarding claim 6, Nakagawa et al. teach, "further comprising a carry section (225 a, b, c, d) for carrying the transfer material, which has an endless belt-like shape (213)."

Regarding claim 7, Nakagawa et al. teach, "wherein the first mode is a full color mode using the toner images formed on all of the plurality of image bearing bodies, and the second mode is a monochrome mode using a toner image formed on one of the image bearing bodies among the plurality of image bearing bodies [0104]."

Regarding claim 8, Nakagawa et al. teach, "An image forming apparatus comprising: a transfer section (222 a, b, c, d) which transfers a toner image onto an intermediate transfer body or a transfer material (213) to form an image on the intermediate transfer body or the transfer material; a selection section [0102] for selecting one mode among a plurality of modes including a first mode for forming the image by using a first number of colors and a second mode for forming the image by using a number of colors which is smaller than the first number of colors [0104]; and a control section [0108] for controlling the transfer section in order that a transfer rate of a toner image in the second mode is larger than that of a toner image in the first mode with regard to at least one color used in the second mode when toner images are transferred onto the intermediate transfer body or the transfer material by the transfer section (Fig. 8b & 9b)."

Regarding claim 9, Nakagawa et al. teach, "wherein, the image is formed by using only one color in the second mode ([0105], Ln. 1-3)."

Regarding claim 10, Nakagawa et al. teach, "further comprising a plurality of image bearing bodies, on which the toner images having different colors from one another are formed (222 a, b, c, d), wherein an image bearing body on which a toner image is not formed among the plurality of image bearing bodies is separated from the intermediate transfer body or the transfer material in the second mode [0105]."

Regarding claim 12, Nakagawa et al. teach, "wherein the image forming apparatus comprises the intermediate transfer body having an endless belt-like shape (Fig.1, ref. # 216)."

Regarding claim 13, Nakagawa et al. teach, "further comprising a carry section (225 a, b, c, d) for carrying the transfer material, which has an endless belt-like shape (213)."

Regarding claim 14, Nakagawa et al. teach, "wherein the first mode is a full color mode using the toner images formed on all of the plurality of image bearing bodies, and the second mode is a monochrome mode using a toner image formed on one of the image bearing bodies among the plurality of image bearing bodies [0104]."

Regarding claim 15, Nakagawa et al. teach, "An image forming apparatus comprising: a transfer section (222 a, b, c, d) which transfers a toner image onto an intermediate transfer body or a transfer material (213) to form an image on the intermediate transfer body or the transfer material; a selection section [0102] for selecting one mode among a plurality of modes including a first mode for forming the image by

using a plurality of colors and a second mode for forming the image by using less number of colors than that of the colors in the first mode [0104]; and a control section [0108] for controlling the transfer section in order that a transfer rate of a toner image in the second mode is larger than that of a toner image in the first mode when toner images are transferred onto the intermediate transfer body or the transfer material by the transfer section (Fig. 8b & 9b)."

Regarding claim 16, Nakagawa et al. teach, "wherein, the image is formed by using only one color in the second mode ([0105], Ln. 1-3)."

Regarding claim 17, Nakagawa et al. teach, "further comprising a plurality of image bearing bodies, on which the toner images having different colors from one another are formed (222 a, b, c, d), wherein an image bearing body on which a toner image is not formed among the plurality of image bearing bodies is separated from the intermediate transfer body or the transfer material in the second mode [0105]."

Regarding claim 19, Nakagawa et al. teach, "wherein the image forming apparatus comprises the intermediate transfer body having an endless belt-like shape (Fig.1, ref. # 216)."

Regarding claim 20, Nakagawa et al. teach, "further comprising a carry section (225 a, b, c, d) for carrying the transfer material, which has an endless belt-like shape (213)."

Regarding claim 21, Nakagawa et al. teach, "wherein the first mode is a full color mode using the toner images formed on all of the plurality of image bearing bodies, and

the second mode is a monochrome mode using a toner image formed on one of the image bearing bodies among the plurality of image bearing bodies [0104].”

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 11, 18, and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. (US Pub. 2003/0095815) in view of the acknowledged prior art (No. Tokukai-2000-98758).

Regarding claims 4, 11, 18, and 25 Nakagawa et al. do not teach, “wherein, the control section controls a current value or a voltage value of the transfer section to control a transfer rate of each of the toner images.” However, the control section that controls a current value or a voltage value of the transfer section to control a transfer rate of each of the toner images is routine in the art as taught by the acknowledged prior art (Page 4, Ln. 3-7). It would have been obvious to one of ordinary skill at the time the invention was made to modify Nakagawa et al. invention to include a control section that controls a current value or voltage value of the transfer section, to control the transfer rate of each of the toner images.

The ordinary artisan would have been motivated to modify Nakagawa et al. invention in a manner described above for at least the purpose of correlating proper toner transfer to the recording material.

Regarding claim 22, Nakagawa et al. teach, "An image forming apparatus comprising: a transfer section (222 a, b, c, d) which transfers a toner image onto an intermediate transfer body or a transfer material (213) to form an image on the intermediate transfer body or the transfer material; a selection section [0102] for selecting one mode among a plurality of modes including a first mode for forming the image by using a plurality of colors including a first color and a second mode for forming the image by using less number of colors including the first color than that of the colors in the first mode [0104]; and a control section [0108] for controlling the transfer section." Nakagawa et al. do not teach, "in order that an output value for transferring a toner image of the first color in the second mode is larger than that for transferring a toner image of the first color in the first mode when toner images are transferred onto the intermediate transfer body or the transfer material by the transfer section." However, as best the examiner can ascertain from the language of the claims, the terms and phrases of the wherein clause are met by the acknowledged prior art (Page 4, Ln. 3-7, one output is larger than another). It would have been obvious to one of ordinary skill at the time the invention was made to modify Nakagawa et al. invention to include an output value for transferring a toner image of the first color in the second mode is larger than that for transferring a toner image of the first color in the first mode when toner images are transferred onto the intermediate transfer body or the transfer material by the transfer section.

The ordinary artisan would have been motivated to modify Nakagawa et al. in a manner described above for at least the purpose of correlating proper toner transfer to the recording material.

Regarding claim 23, Nakagawa et al. teach, "wherein, the image is formed by using only one color in the second mode 9[0105], Ln. 1-3)."

Regarding claim 24, Nakagawa et al. teach, "further comprising a plurality of image bearing bodies, on which the toner images having different colors from one another are formed, wherein an image bearing body on which a toner image is not formed among the plurality of image bearing bodies is separated from the intermediate transfer body or the transfer material in the second mode [0105]."

Regarding claim 26, Nakagawa et al. teach, "wherein the image forming apparatus comprises the intermediate transfer body having an endless belt-like shape (Fig. 1, ref. # 216)."

Regarding claim 27, Nakagawa et al. teach, "further comprising a carry section (225 a, b, c, d) for carrying the transfer material, which has an endless belt-like shape (213)."

Regarding claim 28, Nakagawa et al. teach, "wherein the first mode is a full color mode using the toner images formed on all of the plurality of image bearing bodies, and the second mode is a monochrome mode using a toner image formed on one of the image bearing bodies among the plurality of image bearing bodies [0104]."

Claims 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. (US Pub. 2003/0095815) in view of Nakai et al. (US Pat. # 6,564,021).

Regarding claim 29, Nakagawa et al. teach, "An image forming apparatus comprising: a plurality of image bearing bodies (222 a, b, c, d) on which toner images having different colors from one another are formed; a transfer unit (see Fig. 1, near 222,

a, b, c, and d) comprising a plurality of transfer sections severally provided corresponding to each of the plurality of image bearing bodies for transferring the image formed on each of the plurality of image bearing bodies onto an intermediate transfer body or a transfer material (213); and a control section [0108].” Nakagawa et al. does not teach, “for controlling an output value of each of the plurality of transfer sections, wherein the control section controls the transfer unit in order that an output value of a transfer section provided correspondingly to an image bearing body other than a part of the image bearing bodies is smaller than that of a transfer section provided correspondingly to the part of the image bearing bodies when the toner image is formed on the part of the plurality of image bearing bodies to transfer the toner image on the intermediate transfer body or the transfer material.” However, as best the examiner can ascertain from the language of the claims, the terms and phrases of the wherein clause are met by Nakai et al. (see Col. 9, Ln. 54-61 and Fig. 6). It would have been obvious to one of ordinary skill at the time the invention was made modify Nakagawa et al. to include controlling an output value of each of the plurality of transfer sections, wherein the control section controls the transfer unit in order that an output value of a transfer section provided correspondingly to an image bearing body other than a part of the image bearing bodies is smaller than that of a transfer section provided correspondingly to the part of the image bearing bodies when the toner image is formed on the part of the plurality of image bearing bodies to transfer the toner image on the intermediate transfer body or the transfer material.

The ordinary artisan would have been motivated to modify Nakagawa et al. in a manner described above for at least the purpose of controlling toner usage and preventing re-transfer to a transfer means.

Regarding claims 30 and 31, Nakagawa et al. teach, "wherein the control section [0108] controls the transfer unit (see Fig. 1, near 222, a, b, c, and d)." Nakagawa et al. do not teach, "in order that the output value of the transfer section provided correspondingly to the image bearing body other than the part of the image bearing bodies is halves or less of that of the transfer section provided correspondingly to the part of the image bearing bodies, and is larger than zero, when the toner image is formed on the part of the plurality of image bearing bodies to transfer the toner image on the intermediate transfer body or the transfer material." However, as best the examiner can ascertain from the language of the claims, the terms and phrases of the wherein clause are met by Nakai et al. (see Col. 9, Ln. 54-61 and Fig. 6). It would have been obvious at the time the invention was made to modify Nakagawa et al. to include that the output value of the transfer section provided correspondingly to the image bearing body other than the part of the image bearing bodies is halves or less of that of the transfer section provided correspondingly to the part of the image bearing bodies, and is larger than zero, when the toner image is formed on the part of the plurality of image bearing bodies to transfer the toner image on the intermediate transfer body or the transfer material.

The ordinary artisan would have been motivated to modify Nakagawa et al. in a manner described above for at least the purpose of controlling toner usage and preventing re-transfer to a transfer means.

Regarding claim 32, Nakagawa et al. teach, "wherein the plurality of image bearing bodies contact (Fig. 1, ref. #'s 222 a, b, c, d) with the intermediate transfer body or the transfer material (213), when the toner image is formed on the part of the plurality of image bearing bodies to transfer the toner image on the intermediate transfer body or the transfer material."

Regarding claim 33, Nakagawa et al. teach, "wherein the image forming apparatus comprises the intermediate transfer body having an endless belt-like shape (Fig. 1, ref. # 216)."

Regarding claim 34, Nakagawa et al. teach, "wherein the image forming apparatus further comprises a carry section (225 a, b, c, d) for carrying the transfer material, which has an endless belt-like shape (213), and the transfer unit (222 a, b, c, d) transfers the toner image formed on each of the plurality of image bearing bodies onto the transfer material (213) carried by the carry section."

Regarding claim 35, Nakagawa et al. do not teach, "wherein the number of the part of the plurality of image bearing bodies is one or two." However, as best the examiner can ascertain from the language of the claims, the terms and phrases of the wherein clause are met by Nakai et al. (see Col. 16, Ln. 42-43). It would have been obvious at the time the invention was made to modify Nakagawa et al. to include the number of the part of the plurality of image bearing bodies is one or two.

The ordinary artisan would have been motivated to modify Nakagawa et al. in a manner described above for at least the purpose of creating different colored images and reducing the amount or re-transfer produced on a transfer means.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. (US Pub. 2003/0095815) and Nakai et al. (US Pat. # 6,564,021) as applied to claim 29 above, and further in view of the acknowledged prior art (No. Tokukai-2000-98758).

Regarding claim 36, Nakagawa et al. and Nakai et al. do not teach, "wherein the control section controls a current value or a voltage value of each of the transfer sections to control the output value." However, as best the examiner can ascertain from the language of the claims, the terms and phrases of the wherein clause are met by the acknowledged prior art of the present application (Page 4, Ln. 3-7). It would have been obvious to one of ordinary skill at the time the invention was made to modify Nakagawa et al. and Nakai et al. to include wherein the control section controls a current value or a voltage value of each of the transfer sections to control the output value.

The ordinary artisan would have been motivated to modify Nakagawa et al. and Nakai et al. in a manner described above for at least the purpose of correlating proper toner transfer to the recording material.

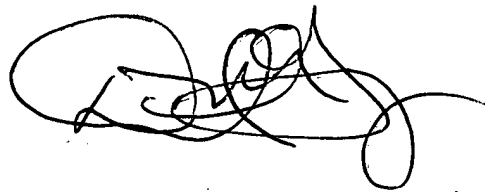
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan D. Walsh whose telephone number is 571-272-2726. The examiner can normally be reached on M-F 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'David Gray', with a large, stylized loop at the end.

David Gray
Primary Examiner

Ryan D. Walsh
Patent Examiner
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